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REMARKS

Claims 1-45 stand as originally filed. Claims 46 to 87 are withdrawn. Claims 88-93 are added to better protect the embodiment of Figure 2, etc. It introduces no new matter. A listing of the claims is provided as required in the new USPTO amendment practice per 37 CFR 1.121.

This responsive amendment follows the relevant paragraphs of the office action to enable ease of following and understanding.

*The office action states, "1.... 2. Claims 1-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Golden et al (U.S. 6,563,793) and Branton Jr et al (U.S. 5,870,558). As per claim 1 Golden disclosed a method for representing interconnection of a plurality of elements on a network, the method comprising: providing a first catalog for a first subset of said elements, and providing a second catalog for a second subset of said elements (col. 5, lines 60- 67); wherein a first element of each pair is taken from the first catalog and a second element of each pair is taken from the second catalog; and forming a connection representation for at least a subset of the pairs (col. 9, lines 60-67). However Golden did not disclose in detail creating a matrix of connection cells formed by an intersection of a pair of elements. In the same field of endeavor Branton disclosed a process that can be used to merge data into the master database table in the database will now be described with reference to the flow chart in 09/327,708 Art Unit: 2141 Page 3 FIG 10. The master database table typically contains the latest available information pertaining to the network elements within the telecommunication network (col. 15, lines 52-59). It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have incorporated a process that can be used to merge data into the master database table in the database will now be described with reference to the flow chart in FIG 10. The master database table typically contains the latest available information pertaining to the network elements within the telecommunication network as taught by Branton in the method of Golden to improve the quality of service by designing priority service to accomplish the desired service.*

In response applicants respectfully state that all the claims of the present application are distinct novel and non-obvious over the alleged prior art references, individually or in combination. Neither the invention of Golden et al (U.S. 6,563,793) or Branton Jr et al (U.S. 5,870,558), (Golden-Branton) is related to, or make obvious, the presently claimed invention. Applicant's representative fails to find the claims to refer to what the Office Action alludes to in (Golden-Branton). Thus claims 1-45 are allowable over (Golden-Branton).

The present invention as claimed is for [See bottom of Page 6]:

"methods, apparatus and computer related articles for connection representation used for configuration, administration, monitoring, modeling etc. In a prime use of this invention the connections are logical connections, often referred to as overlay networks."

The Golden invention is for:

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"[ABSTRACT] A method and apparatus provide reserved bandwidth and QOS/COS virtual circuit connections in a network using both conventional and novel reservation protocols and frame formats. An apparatus according to the invention includes an enterprise control point that communicates with switches via a reserved signaling channel. The switches have been upgraded or replaced to include enhanced functionality. The enhanced switches detect packets that include requests for reserved connections according to existing reservation protocols such as RSVP and IEEE 802.1P/Q. Such detected packets are forwarded to the enterprise control point for processing via a reserved signaling channel. The enterprise control point identifies a path within the network that can satisfy the requested QOS/COS and reserves the requested resources all along the path from beginning to end. A method according to the invention includes detecting packets that include requests for reserved connections according to existing reservation protocols such as RSVP and IEEE 802.1P/Q, forwarding detected packets to an enterprise control point for processing via a reserved signaling channel identifying a path within the network that can satisfy the requested QOS/COS and reserving the requested resources all along the path from beginning to end."

This makes no allusion to the present invention as claimed. Similarly Branton gives no allusion to the presently claimed invention. Branton's invention is for:

"[ABSTRACT] A system and method for effectively retrieving and managing network data from thousands of network elements by providing a graphical user interface to a network management system that permits shared access by service provider personnel using diverse computer equipment distributed over a wide geographical region. User requests to the network management system are input via anyone of a plurality of workstations that are coupled with a company-wide Intranet system. Additionally, users can view predefined performance reports via a web browser program running on anyone of the plurality of workstations coupled with the company-wide Intranet. Users can submit batch or on-line requests. Batch requests are scheduled to be processed at a later time and on-line requests are processed immediately. Results from on-line requests are available to the user as soon as the request has been processed."

Thus, neither Golden nor Branton allude to, have the elements of the presently claimed invention, nor do these separately or in combination make the present invention obvious. The present invention includes, from the middle of Page 7 to Page 9, and reads:

An example embodiment of a method to implement the invention is shown in Figure 2. In 210, catalogs are formed. In 220, the matrix is created and displayed. In 236 a connection representation between pairs of elements in the catalog is formed. From this connection information, actions may be taken within the network to cause the network to instantiate the connections that are defined in 236. The network administrator uses the matrix created in 236 as a basis for monitoring 240, problem determination 250, tuning 260 and/or modeling 270, etc.

It is advantageous to form catalogs of elements considered for interconnection by themselves. Thus, each instance of an object class or type is in a list or catalog. There

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1 can be multiple catalogs of the same object class. For example, in the object class of  
2 routers, one catalog includes all routers on the west coast, and a separate catalog includes  
3 all routers in the east cost. Catalog elements are manipulated such that a new catalog is  
4 created from the intersection or union of existing catalogs. Elements can be ordered,  
5 added, moved and deleted from one or more catalogs.

6 Examples of object classes (the type of catalogs) include one or more of the following:

7 Endpoint catalog - which includes a set of endpoint elements that can connect to  
8 other end point elements.

9 QoS catalog - which includes the types of (Quality of Service) QoS that are  
10 available, e.g. guaranteed latency, guaranteed bandwidth, best effort, etc.

11 Tunnel catalog - which includes the types of IPsec tunnels that are available, e.g.  
12 weak tunnel, normal secure tunnel, extremely secure tunnel, etc.

13 Encryption methods catalog - which includes the types of encryption that are  
14 available, e.g. DES, 3DES, RC4, blowfish, etc.

15 Validity catalog which includes the times that the connection is valid, e.g., normal  
16 business hours, not first shift, Saturdays 10 to 11 AM, etc.

17 Action catalog - which includes the type of actions that a user can do, e.g. halt  
18 traffic between the endpoints, cause an IPsec key exchange to occur immediately,  
19 update the monitoring information, etc.

20 Traffic Loading catalog - which includes the network traffic characteristics (e.g.  
21 frame size distribution, frame transmission distribution) for use as loading input to  
22 a network model.

23 Catalogs may be hierarchical such that the definition of an element in a "higher" level  
24 catalog may be created from and/or with elements of "lower" level catalogs. For example,  
25 in creating the tunnel catalog, one can select elements from a type of encryption catalog, a  
26 validity time period catalog, etc. This hierarchical construct allows multiple levels of  
27 abstraction.

28 Furthermore, Page 3, lines 7-17, reads:

29 "The following are definitions of terms as used herein:

30 Network Element - the start or end point of a connection.

31 Sub-element - element that is a member of a catalog that is itself an element in a  
32 catalog.

33 Catalog - a named set of elements. The catalog elements can be atomic or can  
34 themselves be a catalog, thus enabling catalogs of catalogs and so on.

35 Sub-catalog - A catalog included in another catalog."

36 Claim 1 of the present invention reads:

37 1. A method for representing interconnection of a plurality of elements on a network, the  
38 method comprising:

39 providing a first catalog for a first subset of said elements, and providing a second  
40 catalog for a second subset of said elements;

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1 creating a matrix of connection cells formed by an intersection of a pair of  
2 elements, wherein a first element of each pair is taken from the first catalog and a  
3 second element of each pair is taken from the second catalog; and  
4 forming a connection representation for at least a subset of the pairs.

5 Applicants may be their own lexicographer. Thus the elements, idea, novelty of the present  
6 invention are not in, or made obvious by, Golden or Branton separately or in combination.  
7 Neither would these make obvious the method of claim 1, with which they are not related.  
8 Neither provide, nor would be a source for, a "method for representing interconnection of a  
9 plurality of elements on a network. The method includes: providing a first catalog for a first  
10 subset of said elements, and providing a second catalog for a second subset of said elements,  
11 "used in the step of creating a matrix and in the step of forming a connection representation.  
12 Neither have any catalog meeting the definition reproduced above. Apparently nor is either  
13 concerned with forming a connection representation of subsets of pairs.

14 More particularly, applicants' representative fails to find in Golden (col. 5, lines 60- 67) backup  
15 for the office actions statement:

16 Golden disclosed a method for representing interconnection of a plurality of elements on  
17 a network, the method comprising: providing a first catalog for a first subset of said  
18 elements, and providing a second catalog for a second subset of said elements (col. 5,  
19 lines 60- 67)

20 Golden (col. 5, lines 60- 67) reads:

21 "According to a further aspect of the invention, an apparatus according to the invention  
22 further includes a network control system server coupled to different local area networks  
23 and also coupled to controllable network elements within an interconnection path  
24 between the local area networks. Enterprise control points within the network are further  
25 adapted to communicate with the network control system server. The network control  
26 system server is adapted ..."

27 This excerpt shows no allusion to a catalog, and most certainly not to a first and second catalog  
28 as defined and used in the presently claimed invention.

29 Furthermore, applicants' representative fails to find in Golden (col. 5, lines 60- 67) backup for the  
30 office actions statement:

31 "and forming a connection representation for at least a subset of the pairs (col. 9, lines  
32 60-67) ..."

33 In (col. 9, lines 60-67) Golden is concerned with "determining the overall capacity of the first  
34 available path by determining from network elements registry 57 whether the minimum  
35 bandwidth available through each link, switch, and switch port in the path will be sufficient to  
36 fulfill the bandwidth and quality of service requested for the connection. ... ." This is not the  
37 step in claim 1, of "forming a connection representation for at least a subset of the pairs".

38 Furthermore, applicants do see in Branton what the office action alleges.

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1        *However Golden did not disclose in detail creating a matrix of connection cells formed*  
2        *by an intersection of a pair of elements. In the same field of endeavor Branton disclosed a*  
3        *process that can be used to merge data into the master database table in the database*  
4        *will now be described with reference to the flow chart in FIG 10. The master database*  
5        *table typically contains the latest available information pertaining to the network*  
6        *elements within the telecommunication network (col. 15, lines 52-59). (It would have been*  
7        *obvious to one having ordinary skill in the art at the time of the invention was made to*  
8        *have incorporated a process that can be used to merge data into the master database*  
9        *table in the database will now be described with reference to the flow chart in FIG 10.*  
10       *The master database table typically contains the latest available information pertaining*  
11       *to the network elements within the telecommunication network as taught by Branton in*  
12       *the method of Golden to improve the quality of service by designing priority service to*  
13       *accomplish the desired service.*

14       Applicants' representative fails to see any backup for the above statements and asks the Examiner  
15       to provide backup for these allegations. Branton indeed discloses "a process that can be used to  
16       merge data into the master database table in the database will now be described". This  
17       apparently has little if anything to do with a matrix, a cell, a pair of cells which are apparently the  
18       words of the office action only, and not in Branton. The present invention is not involved with  
19       merging data into a master database. In the present invention, connection representation  
20       employing hierarchical catalogs provide advantages and many uses besides and over standard  
21       routing tables, connection pathways etc.

22       It would indeed not be obvious to one having ordinary skill in the art at the time of the invention  
23       was made to invent the invention in claims 1-45. This would be even if one for some reason  
24       would choose to

25       *"have incorporated a {BRANTON's} process that can be used to merge data into the*  
26       *master database table in the database will now be described with reference to the flow*  
27       *chart in FIG 10."*

28       The present invention is not limited to any

29       *"master database table typically contains the latest available information pertaining to*  
30       *the network elements within the telecommunication network as taught by Branton in the*  
31       *method of Golden to improve the quality of service by designing priority service to*  
32       *accomplish the desired service."*

33       nor is the claims invention related to a priority service to accomplish the desired service. For all  
34       of the above reasons, the invention claimed in claim 1, and claims 2-45 which all ultimately  
35       depend thereupon, are allowable over the cited references.

36       It is further noted that claims 2-45, all of which are ultimately dependent upon claim 1, provide  
37       further limitations to a "method for representing interconnection of a plurality of elements on a  
38       network." Neither of the cited references are related to these claimed inventions. The use of any  
39       reference of a 'word' in a dependent claim does not constitute making obvious the invention in  
40       each of claims 2-45. Claims 2-45 are allowable each on its own and because each depends on an  
41       allowable claim or claims.

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1        *The office action further states, "3. As per claim 2 Golden-Branton disclosed wherein at*  
2        *least one element is a catalog of sub-elements, and the method further comprises the step*  
3        *of including all sub-elements in the matrix (Golden, col. 8, lines 46-67).*

4        In response applicants respectfully state that a review of (Golden, col. 8, lines 46-67) describes  
5        relates to switches using a conventional switching table ... Theses lines read:

6        "Accordingly, switches 56 include an enhanced switch engine 70 that makes forwarding  
7        decisions based on a conventional switch table 69 as well as a novel reserved connection  
8        pairs list 67. Enhanced switch engine 70 further includes functionality for detecting  
9        packets using reservation protocols such as RSVP and forwarding information concerning  
10       them to ECP 50 via reservation interface 68. Moreover, switches 56 include additional  
11       functionality in the form of reservation interface function 68 that communicates with ECP  
12       50 via reserved signaling channel 58 to exchange information about reserved connections.  
13       The effect of the above-noted enhanced functionality is that switches 56 give higher  
14       priority to packets belonging to reserved virtual circuit connections than to other packets  
15       contending for access to the same ports as needed by the reserved virtual circuit  
16       connections, thereby guaranteeing the desired service for the reserved connections.

17       It should be apparent to those skilled in the art that switches 56 are not necessarily layer 2  
18       forwarding devices; rather, the enhanced functionality present within switches 56 could  
19       be applied to application layer forwarding devices and ...

20       This has no relationship to the present invention for a method for representing employing  
21       catalogs. Furthermore these are not limited to conventional switching tables, etc. Thus claim 2  
22       is allowable over the references.

23       *The office action further states, "4. As per claim 3 Golden-Branton disclosed wherein the*  
24       *network is a communications network and at least a subset of the elements includes*  
25       *routers (Golden, col. 8, lines 1-9).*

26       In response applicants respectfully state that a review of (Golden, col. 8, lines 1-9) does not  
27       support the statement reproduced above. So claim 3 is allowable over the cited art.

28       *The office action further states, "5. As per claim 4 Golden-Branton disclosed wherein the*  
29       *network is an IP network and at least a subset of said elements have an IP protocol stack*  
30       *(Branton, col. 23, lines 2-14).*

31       In response applicants respectfully state that a review of (Branton, col. 23, lines 2-14) ("IP  
32       addresses,") does not support the statement reproduced above. So claim 4 is allowable over the  
33       cited art.

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1        *The office action further states, "6. As per claim 5 Golden-Branton disclosed wherein at*  
2        *least one particular element in the first catalog is the same as a particular element in the*  
3        *second catalog (Branton, col. 15, lines 53- 65).*

4        In response applicants respectfully state that a review of (*Branton, col. 15, lines 53- 65*) does not  
5        support the statement reproduced above. Branton is not concerned with any catalog as used in  
6        the present invention, and do not make obvious claim 5. So claim 5 is allowable over the cited  
7        art.

8        *The office action further states, "7. As per claim 6 Golden-Branton disclosed wherein at*  
9        *least one of the catalogs includes a plurality of sub-catalogs (Branton, col. 15, lines*  
10       *53-65).*

11       In response applicants respectfully state that a review of (*Branton, col. 15, lines 53- 65*) does not  
12       support the statement reproduced above. Branton is not concerned with any catalog as used in  
13       the present invention, and do not make obvious claim 6. So claim 6 is allowable over the cited  
14       art.

15       *The office action further states, "8. As per claim 7 Golden-Branton disclosed wherein at*  
16       *least a portion of the network is a computer network (Branton, col. 9, lines 53-64).*

17       In response applicants respectfully state that a review of (*Branton, col. 9, lines 53-64*) does not  
18       mention anything regarding 'representing a connection', a computer, and does not support the  
19       statement reproduced above. Branton is not concerned with any catalog as used in the present  
20       invention, and do not make obvious claim 7. So claim 7 is allowable over the cited art.

21       *The office action further states, "9. As per claim 8 Golden-Branton disclosed wherein at*  
22       *least a portion of the network is a virtual network (Golden, col. 9, lines 1-9).*

23       In response applicants respectfully state that a review of (*Branton, col. 9, lines 53-64*) does not  
24       mention anything regarding 'representing a connection', a virtual network, and does not support  
25       the statement reproduced above. *Golden-Branton* are not concerned with any catalog as used in  
26       the present invention, and do not make obvious claim 8. So claim 8 is allowable over the cited  
27       art.

28       *The office action further states, "10. As per claim 9 Golden-Branton disclosed wherein at*  
29       *least a portion of the network is a network implemented using a layer above a physical*  
30       *layer (Golden, col. 9, lines 56-67).*

31       In response applicants respectfully state that a review of (*Golden, col. 9, lines 56-67*) does not  
32       mention anything regarding 'representing a connection', using a layer, and does not support the  
33       statement reproduced above. *Golden-Branton* are not concerned with any catalog as used in the  
34       present invention, and do not make obvious claim 9. So claim 9 is allowable over the cited art.

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1        *The office action further states, "11. As per claim 10 Golden-Branton disclosed wherein*  
2        *at least a portion of the network is an overlay network (Golden, col. 9, lines 1-9).*

3        In response applicants respectfully state that a review of (*Branton, col. 9, lines 1-9*) does not  
4        mention anything regarding 'representing a connection', overlay network, and does not support  
5        the statement reproduced above. Branton is not concerned with any catalog as used in the  
6        present invention, and do not make obvious claim 10. So claim 10 is allowable over the cited art.

7        *The office action further states, "12. As per claim 11 Golden-Branton disclosed wherein*  
8        *at least a portion of the overlay network is an IP Sec network (Branton, col. 23, lines*  
9        *2-14).*

10       In response applicants respectfully state that a review of (*Branton, col. 23, lines 2-14*) does not  
11       mention anything regarding 'representing a connection', "*a portion of the overlay network is an*  
12       *IP Sec network,*" and does not support the statement reproduced above. Branton is not concerned  
13       with any catalog as used in the present invention, and do not make obvious claim 11. So claim  
14       11 is allowable over the cited art.

15       *The office action further states, "13. As per claim 12 Golden-Branton disclosed wherein*  
16       *at least a portion of the overlay network provides Quality of Service (Golden, col. 5, lines*  
17       *29-36).*

18       In response applicants respectfully state that a review of (*Golden, col. 5, lines 29-36*) mentions  
19       QOS as many other patents do, but does not mention anything regarding 'representing a  
20       connection', "*a portion of the overlay network provides QOS*" and does not support the statement  
21       reproduced above. Golden-Branton are not concerned with any catalog as used in the present  
22       invention, and do not make obvious claim 12. So claim 12 is allowable over the cited art.

23       *The office action further states, "14. As per claim 13 Golden-Branton wherein at least a*  
24       *portion of the overlay network is an MPLS network (Golden, col. 20, lines 34-44).*

25       In response applicants respectfully state that a review of (*Golden, col. 20, lines 34-44*) mentions  
26       QOS as many other patents do, but does not mention anything regarding 'representing a  
27       connection', "*a portion of the overlay network is an MPLS network,*" and does not support the  
28       statement reproduced above. Golden-Branton are not concerned with any catalog as used in the  
29       present invention, and do not make obvious claim 13. So claim 13 is allowable over the cited art.

30       *The office action further states, "15. As per claim 14 Golden-Branton disclosed wherein*  
31       *the network includes VLANs (Golden, col. 9, lines 1-9).*

32       In response applicants respectfully state that a review of (*Golden, col. 9, lines 1-9*), does not  
33       mention anything regarding 'representing a connection' with VLANs, and does not support the  
34       statement reproduced above. Golden-Branton are not concerned with any catalog as used in the  
35       present invention, and do not make obvious claim 14. So claim 14 is allowable over the cited art.



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1        *The office action further states, "16. As per claim 15 Golden-Branton disclosed further*  
2        *comprising the step of configuring at least a portion of the network employing the*  
3        *representation (Branton, col. 11, lines 51-57).*

4        In response applicants respectfully state that a review of (*Branton, col. 11, lines 51-57*), does not  
5        mention anything regarding 'representing a connection' with the step of configuring ...  
6        representation, and does not support the statement reproduced above. Golden-Branton are not  
7        concerned with any catalog as used in the present invention, and do not make obvious claim 15.  
8        So claim 15 is allowable over the cited art.

9        *The office action further states, "17. As per claim 16 Golden-Branton disclosed wherein*  
10       *at least a portion of one catalog is formed using combinatorial operations upon elements*  
11       *of other catalogs (Branton, col. 15, lines 53-65).*

12       In response applicants respectfully state that a review of (*Branton, col. 15, lines 53-65*), does not  
13       mention anything regarding 'representing a connection' with "*using combinatorial operations*  
14       *upon elements of other catalogs,*" and does not support the statement reproduced above.  
15       Golden-Branton are not concerned with any catalog as used in the present invention, and do not  
16       make obvious claim 16. So claim 16 is allowable over the cited art.

17       *The office action further states, "18. As per claim 17 Golden-Branton disclosed further*  
18       *comprising associating at least one task with at least one connection (Branton, col. 7,*  
19       *lines 40-47).*

20       In response applicants respectfully state that a review of (*Branton, col. 7, lines 40-47*), does not  
21       mention anything regarding 'representing a connection' with "*associating at least one task with at*  
22       *least one connection,*" and does not support the statement reproduced above. Golden-Branton  
23       are not concerned with any catalog as used in the present invention, and do not make obvious  
24       claim 17. So claim 17 is allowable over the cited art.

25       *The office action further states, "19. As per claim 18 Golden-Branton disclosed further*  
26       *comprising triggering at least said one task as a result of a change of state of said one*  
27       *connection (Branton, col. 7, lines 40-47).*

28       In response applicants respectfully state that a review of (*Branton, col. 7, lines 40-47*), does not  
29       mention anything regarding 'representing a connection' with "*triggering at least said one task as*  
30       *a result of a change of state of said one connection,*" and does not support the statement  
31       reproduced above. Golden-Branton are not concerned with any catalog as used in the present  
32       invention, and do not make obvious claim 18. So claim 18 is allowable over the cited art.

33       *The office action further states, "20. As per claim 19 Golden-Branton disclosed wherein*  
34       *at least one of the elements is an abstract entity (Golden, col. 19, lines 50-59).*

35       In response applicants respectfully state that a review of (*Golden, col. 19, lines 50-59*), does not  
36       mention anything regarding 'representing a connection' or an abstract entity, and does not support

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1 the statement reproduced above. Golden-Branton are not concerned with any catalog as used in  
2 the present invention, and do not make obvious claim 14. So claim 14 is allowable over the cited  
3 art.

4 *The office action further states, "21. As per claim 20 Golden-Branton disclosed wherein*  
5 *an element embodies the attributes of Quality of Service (Golden, col. 5, lines 29-36).*

6 In response applicants respectfully state that a review of (Golden, col. 5, lines 29-36), does not  
7 mention anything regarding 'representing a connection' with QOS, but rather provision of QOS,  
8 and does not support the statement reproduced above. Golden-Branton are not concerned with  
9 any catalog as used in the present invention, and do not make obvious claim 20. So claim 20 is  
10 allowable over the cited art.

11 *The office action further states, "22. As per claim 21 Golden-Branton disclosed wherein*  
12 *an element embodies the attributes of security (Golden, col. 22, lines 5-13).*

13 In response applicants respectfully state that a review of (Golden, col. 22, lines 5-13), does not  
14 mention anything regarding 'representing a connection' with "attributes of security," but rather to  
15 perform security functions, and does not support the statement reproduced above.  
16 Golden-Branton are not concerned with any catalog as used in the present invention, and do not  
17 make obvious claim 21. So claim 21 is allowable over the cited art.

18 *The office action further states, "23. As per claim 22 Golden-Branton disclosed wherein*  
19 *at least one of the elements is a physical entity (Golden, col. 20, lines 35-44).*

20 In response applicants respectfully state that a review of (Golden, col. 20, lines 35-44), does not  
21 mention anything regarding 'representing a connection' with "a physical entity," and does not  
22 support the statement reproduced above. Golden-Branton are not concerned with any catalog as  
23 used in the present invention, and do not make obvious claim 22. So claim 22 is allowable over  
24 the cited art.

25 *The office action further states, "24. As per claim 23 Golden-Branton disclosed further*  
26 *comprising displaying at least one portion of the matrix (Golden-Branton, col. 8, lines*  
27 *46-67).*

28 In response applicants respectfully state that a review of (Golden-Branton, col. 8, lines 46-67),  
29 both do not mention anything regarding 'representing a connection' with "displaying at least one  
30 portion of the matrix," and do not support the statement reproduced above. Golden-Branton are  
31 not concerned with any catalog as used in the present invention, and do not make obvious claim  
32 14. So claim 14 is allowable over the cited art.

33 *The office action further states, "25. As per claim 24 Golden-Branton disclosed further*  
34 *comprising monitoring at least one portion of the matrix (Golden, col. 8, lines 46-67).*

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1 In response applicants respectfully state that a review of (*Golden, col. 9, lines 1-9*), does not  
2 mention anything regarding 'representing a connection' with VLANs, and does not support the  
3 statement reproduced above. Golden-Branton are not concerned with any catalog as used in the  
4 present invention, and do not make obvious claim 14. So claim 14 is allowable over the cited art.

5 *The office action further states, "26. As per claim 25 Golden-Branton disclosed wherein*  
6 *the matrix is structured such that elements of a row are different from elements of a*  
7 *column (Golden, col. 8, lines 46-67).*

8 In response applicants respectfully state that a review of (*Golden, col. 8, lines 46-67*), does not  
9 mention anything regarding 'representing a connection' with a matrix so structured, and does not  
10 support the statement reproduced above. Golden-Branton are not concerned with any catalog as  
11 used in the present invention, and do not make obvious claim 25. So claim 25 is allowable over  
12 the cited art.

13 *The office action further states, "27. As per claim 26 Golden-Branton disclosed wherein*  
14 *at a least a portion of the connections form a star network (Golden, col. 22, lines 13-18).*

15 In response applicants respectfully state that a review of (*Golden, col. 22, lines 13-18*), does not  
16 mention anything regarding 'representing a connection' with a star network, and does not support  
17 the statement reproduced above. Golden-Branton are not concerned with any catalog as used in  
18 the present invention, and do not make obvious claim 26. So claim 26 is allowable over the cited  
19 art.

20 *The office action further states, "28. As per claim 27 Golden-Branton disclosed wherein*  
21 *the matrix is structured such that elements on a the row are identical to elements on a*  
22 *column (Golden, col. 8, lines 46-67).*

23 In response applicants respectfully state that a review of (*Golden, col. 8, lines 46-67*), does not  
24 mention anything regarding 'representing a connection' with a matrix so structured, and does not  
25 support the statement reproduced above. Golden-Branton are not concerned with any catalog as  
26 used in the present invention, and do not make obvious claim 27. So claim 27 is allowable over  
27 the cited art.

28 *The office action further states, "29. As per claim 28 Golden-Branton disclosed wherein*  
29 *at a least a portion of the connections form a mesh network (Golden, col. 22, lines*  
30 *13-18).*

31 In response applicants respectfully state that a review of (*Golden, col. 22, lines 13-18*), does not  
32 mention anything regarding 'representing a connection' with a mesh network, and does not  
33 support the statement reproduced above. Golden-Branton are not concerned with any catalog as  
34 used in the present invention, and do not make obvious claim 28. So claim 28 is allowable over  
35 the cited art.

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1        *The office action further states, "36. As per claim 29 Golden-Branton disclosed wherein*  
2        *at least another element is a second catalog of sub-elements and the method further*  
3        *comprises the step of forming a sub-matrix of said one element with said another element*  
4        *(Golden, col. 8, lines 46-67).*

5        In response applicants respectfully state that a review of (Golden, col. 8, lines 46-67), does not  
6        mention anything regarding 'representing a connection' with a sub-matrix of an element, and does  
7        not support the statement reproduced above. Golden-Branton are not concerned with any catalog  
8        as used in the present invention, and do not make obvious claim 29. So claim 29 is allowable  
9        over the cited art.

10       *The office action further states, "31. As per claim 36 Golden-Branton disclosed further*  
11       *comprising employing a wizard to form at least a subset of the elements.*

12       In response applicants respectfully state that a review of Golden-Branton, does not mention  
13       anything regarding 'representing a connection' with a wizard, and does not support the statement  
14       reproduced above. Golden-Branton are not concerned with any catalog as used in the present  
15       invention, and do not make obvious claim 36. So claim 36 is allowable over the cited art.

16       *The office action further states, "32. As per claim 31 Golden-Branton disclosed further*  
17       *comprising initializing all connections to a connected state (Branton, col. 15, lines*  
18       *53-65).*

19       In response applicants respectfully state that a review of (Branton, col. 15, lines 53-65), does not  
20       mention anything regarding 'representing a connection' with "a connected state," and does not  
21       support the statement reproduced above. Golden-Branton are not concerned with any catalog as  
22       used in the present invention, and do not make obvious claim 31. So claim 31 is allowable over  
23       the cited art.

24       *The office action further states, "33. As per claim 32 Golden-Branton disclosed further*  
25       *comprising employing a wizard to determine which connections to be brought to a*  
26       *connected state (Branton, col. 5, lines 53-67).*

27       In response applicants respectfully state that a review of (Branton, col. 5, lines 53-67), does not  
28       mention anything regarding 'representing a connection' with a wizard, and does not support the  
29       statement reproduced above. Golden-Branton are not concerned with any catalog as used in the  
30       present invention, and do not make obvious claim 32. So claim 32 is allowable over the cited art.

31       *The office action further states, "34. As per claim 33 Golden-Branton disclosed further*  
32       *comprising initializing all connections to a non-connected state (Branton, col. 54, lines*  
33       *53-67).*

34       In response applicants respectfully state that a review of (Branton, col. 54, lines 53-67), does not  
35       mention anything regarding 'representing a all connections to a non-connected state', and does  
36       not support the statement reproduced above. Golden-Branton are not concerned with any catalog

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1 as used in the present invention, and do not make obvious claim 33. So claim 33 is allowable  
2 over the cited art.

3 *The office action further states, "35. As per claim 34 Golden-Branton disclosed further*  
4 *comprising choosing at least one pair upon which a manipulation is performed (Branton,*  
5 *col. 6, lines 57-67).*

6 In response applicants respectfully state that a review of (*Branton, col. 6, lines 57-67*), does not  
7 mention anything regarding 'representing a connection' with "*choosing at least one pair upon*  
8 *which a manipulation is performed,*" and does not support the statement reproduced above.  
9 Golden-Branton are not concerned with any catalog as used in the present invention, and do not  
10 make obvious claim 34. So claim 34 is allowable over the cited art.

11 *The office action further states, "36. As per claim 35 Golden-Branton disclosed further*  
12 *comprising modifying at least one changeable attribute of the connection (Branton, col.*  
13 *6, lines 43-56).*

14 In response applicants respectfully state that a review of (*Branton, col. 6, lines 43-56*), does not  
15 mention anything regarding 'representing a connection' with "*modifying at least one changeable*  
16 *attribute of the connection,*" and does not support the statement reproduced above.  
17 Golden-Branton are not concerned with any catalog as used in the present invention, and do not  
18 make obvious claim 35. So claim 35 is allowable over the cited art.

19 *The office action further states, "37. As per claim 36 Golden-Branton disclosed further*  
20 *comprising causing an inheritable change to be inherited by a group of inheritors*  
21 *(Branton, col. 8, lines 56-67).*

22 In response applicants respectfully state that a review of (*Branton, col. 8, lines 56-67*), does not  
23 mention anything regarding 'representing a connection' with "*causing an inheritable change to be*  
24 *inherited by a group of inheritors,*" and does not support the statement reproduced above.  
25 Golden-Branton are not concerned with any catalog as used in the present invention, and do not  
26 make obvious claim 36. So claim 36 is allowable over the cited art.

27 *The office action further states, "38. As per claim 37 Golden-Branton disclosed wherein a*  
28 *first element is a first gateway, a second element is a second gateway, and the attribute is*  
29 *setting a security policy, and the step of causing causes the security policy to be set at all*  
30 *elements included in the first and second gateway (Golden, col. 22, lines 5-13).*

31 In response applicants respectfully state that a review of (*Golden, col. 22, lines 5-13*), does not  
32 mention anything regarding 'representing a connection' "*wherein a first element is a first*  
33 *gateway, a second element is a second gateway, and the attribute is setting a security policy, and*  
34 *the step of causing causes the security policy to be set at all elements included in the first and*  
35 *second gateway,*" and does not support the statement reproduced above. Golden-Branton are not  
36 concerned with any catalog as used in the present invention, and do not make obvious claim 37.  
37 So claim 37 is allowable over the cited art.

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1        *The office action further states, "39. As per claim 38 Golden-Branton disclosed wherein a*  
2        *first element is a catalog of sub- elements, and the attribute list setting a Quality of*  
3        *Service policy, and the step of causing causes the Quality of Service policy to be set at all*  
4        *sub-elements of the first element (Golden, col. 5, lines 29-36).*

5        In response applicants respectfully state that a review of *Golden-Branton*, does not mention  
6        anything regarding 'representing a connection' "*wherein a first element is a catalog of sub-*  
7        *elements, and the attribute list setting a Quality of Service policy, and the step of causing causes*  
8        *the Quality of Service policy to be set at all sub-elements of the first element,"* and does not  
9        support the statement reproduced above. *Golden-Branton* are not concerned with any catalog as  
10       used in the present invention, and do not make obvious claim 38. So claim 38 is allowable over  
11       the cited art.

12       *The office action further states, "40. As per claim 39 Golden-Branton disclosed wherein a*  
13       *sub-catalog includes other sub- catalogs (Golden, col. 5, lines 29-36).*

14       In response applicants respectfully state that a review of (*Golden, col. 5, lines 29-36*), does not  
15       mention anything regarding 'representing a connection' with "*a sub-catalog includes other sub-*  
16       *catalogs,"* and does not support the statement reproduced above. *Golden-Branton* are not  
17       concerned with any catalog as used in the present invention, and do not make obvious claim 39.  
18       So claim 39 is allowable over the cited art.

19       *The office action further states, "41. As per claim 40 Golden-Branton disclosed further*  
20       *comprising monitoring at least a portion of a network state in accordance with the*  
21       *representation (Branton, col. 5, lines 54-63).*

22       In response applicants respectfully state that a review of (*Branton, col. 5, lines 54-63*), does not  
23       mention anything regarding 'representing a connection' with "*monitoring at least a portion of a*  
24       *network state in accordance with the representation,"* and does not support the statement  
25       reproduced above. *Golden-Branton* are not concerned with any catalog as used in the present  
26       invention, and do not make obvious claim 40. So claim 40 is allowable over the cited art.

27       *The office action further states, "42. As per claim 41 Golden-Branton disclosed further*  
28       *comprising displaying at least a portion of the network state.*

29       In response applicants respectfully state that a review of *Golden-Branton*, does not mention  
30       anything regarding 'representing a connection' with "*displaying at least a portion of the network*  
31       *state,"* and does not support the statement reproduced above. *Golden-Branton* are not concerned  
32       with any catalog as used in the present invention, and do not make obvious claim 41. So claim  
33       41 is allowable over the cited art.

34       *The office action further states, "43. As per claim 42 Golden-Branton disclosed wherein*  
35       *the step of displaying includes employing color codes for showing attributes (Branton,*  
36       *col. 6, lines 57-65).*

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1 In response applicants respectfully state that a review of (*Branton, col. 6, lines 57-65*), does not  
2 mention anything regarding 'representing a connection' with a color code, and does not support  
3 the statement reproduced above. Golden-Branton are not concerned with any catalog as used in  
4 the present invention, and do not make obvious claim 42. So claim 42 is allowable over the cited  
5 art.

6 *The office action further states, "44. As per claim 43 Golden-Branton disclosed further*  
7 *comprising the step of modeling connections (Branton, col. 6, lines 57-65).*

8 In response applicants respectfully state that a review of (*Branton, col. 6, lines 57-65*), does not  
9 mention anything regarding 'representing a connection' with a step of modeling, and does not  
10 support the statement reproduced above. Golden-Branton are not concerned with any catalog as  
11 used in the present invention, and do not make obvious claim 43. So claim 43 is allowable over  
12 the cited art.

13 *The office action further states, "45. As per claim 44 Golden-Branton disclosed further*  
14 *comprising indicating changes in performance in response to an occurrence (Branton,*  
15 *col. 8, lines 4-15).*

16 In response applicants respectfully state that a review of *Golden-Branton*, does not mention  
17 anything regarding 'representing a connection' with "*indicating changes in performance in*  
18 *response to an occurrence,*" and does not support the statement reproduced above.  
19 Golden-Branton are not concerned with any catalog as used in the present invention, and do not  
20 make obvious claim 44. So claim 44 is allowable over the cited art.

21 *The office action further states, "46. As per claim 45 Golden-Branton disclosed wherein a*  
22 *least one element of a particular pair is a sub-catalog, the method further comprising*  
23 *expanding elements of the pair into a sub-matrix (Golden, col. 8, lines 46-67).*

24 In response applicants respectfully state that a review of (*Golden, col. 8, lines 46-67*), does not  
25 mention anything regarding 'representing a connection' "*wherein a least one element of a*  
26 *particular pair is a sub-catalog, the method further comprising expanding elements of the pair*  
27 *into a sub-matrix,*" and does not support the statement reproduced above. Golden-Branton are  
28 not concerned with any catalog as used in the present invention, and do not make obvious claim  
29 45. So claim 45 is allowable over the cited art.

30 In conclusion claims 1-45 are allowable over the cited references. the Examiner is requested to  
31 support the many statements for which applicants find no support. Applicants invention as  
32 originally claimed is novel and non-obvious over the cited art.

33 It is anticipated that this amendment brings the application to allowance of claims 1-45, and  
34 favorable action is respectfully solicited. In the unlikely event that any claim remains rejected,  
35 please contact the undersigned by phone in order to discuss the application.

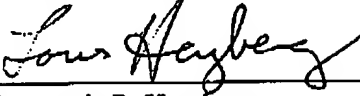
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1 Please charge any fee necessary to enter this paper to deposit account 09-0468.

2 Respectfully submitted,

3 By:   
4 Dr. Louis P. Herzberg  
5 Reg. No. 41,500  
6 Voice Tel. (914) 945-2885  
7 Fax. (914) 945-3281

8 IBM CORPORATION  
9 Intellectual Property Law Dept.  
10 P.O. Box 218  
11 Yorktown Heights, New York 10598